



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,737	07/15/2003	Ludmila Cherkasova	200310236-1	7028
22879	7590	03/21/2007	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			DALENCOURT, YVES	
		ART UNIT	PAPER NUMBER	
		2157		
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	03/21/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.	Applicant(s)
10/619,737	CHERKASOVA, LUDMILA
Examiner	Art Unit
Yves Dalencourt	2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 19 December 2006.
2a) This action is FINAL. 2b) This action is non-final.
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-28 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 1-28 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.

- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
5) Notice of Informal Patent Application
6) Other: _____.

DETAILED ACTION

This office action is responsive to amendment filed on 12/19/2006.

Response to Amendment

The Examiner has acknowledged Applicants' remarks.

Response to Arguments

Applicant's arguments filed on 12/19/2006 have been fully considered but they are not persuasive.

Regarding Applicant's argument (pages 9 and 10), the Examiner contends that the double patenting rejection is proper because a nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is obvious over, the reference claim(s) in view of Chung as provided in the last office action. See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

The double patenting rejection is proper, and thus the rejection is maintained.

In response to applicant's argument that there is no suggestion to combine the references (pages 10 and 11), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir.

1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Applicants argue that Sim does not teach or suggest a distribution technique in which a first node attempts to distribute the plurality of subfiles that make up a file F from the first node to a first group of recipient nodes, wherein the first node attempts to communicate at least one subfile to each recipient node of said first group but not all of said plurality of subfiles to any recipient node of the first group but not all of the plurality of subfiles to any recipient node of the first group (pages 12 - 14). The Examiner respectfully disagrees because Sim discloses that Nodes A, E, and H examine the replicate packet and decide they all match the distribution criteria (i.e., they are "qualified" nodes). When ready, nodes A, E, and H issue commands to retrieve a portion of the files from the nearest node (i.e., node B) in the SCDN. Nodes E and H are leaf nodes thus they do not propagate the replicate command back to node B, because it is the originating node. However, node A may send the replicate request to node C, thus, Sim does teach in a broader sense the claimed limitation of "of nodes A and E exchanging their respective subfiles received from node B (see col. 14, lines 25 - 39; col. 16, lines 7 - 16; col. 20, line 34 through col. 21, line 24).

Applicants argued that Sim fails to teach or suggest that the plurality of recipient nodes of the first group attempt to exchange their respective subfiles received from the first node (page 14). Such argument is moot because the Examiner did not rely on Sim for such limitation.

Regarding Applicants' argument (pages 15 - 21), the Examiner contends that Zayas does suggest the idea of a plurality of recipient nodes attempting to exchange

their respective subfiles received from a first node because Zayas discloses that each file system 205A, 205B, and 205C are interconnected via a network 215. Each file system stores several volumes of files , each of which can be replicated on a different set of file servers (col. 3, lines 31 - 39), and Sim discloses in fig. 13 that the origin node contains all of the subfiles while the recipient nodes A, C, E, F, and H each receives some of the subfiles. Sim also discloses that Node A may not send the replicate command back to node B, because it is the originating node. However, Zayas in combination with Sim do read on the claimed limitation since both are concerned with files/subfiles distribution or replication. Thus, such combination between Sim and Zayas provide an obvious advantage for supporting file replications across a plurality of file servers for the purpose of automatically distributing data stored in files to users, thereby improving reliability, availability, local autonomy, load balancing, and data access performance.

1. In response to applicants' argument that there is no suggestion to combine the references (pages 20 - 21), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Sim discloses performing distribution of said file F to a plurality of recipient nodes using a distribution technique that comprises attempting to distribute the plurality of subfiles

Art Unit: 2157

from a first node to a first group of recipient nodes (see col. 14, lines 25 - 39; col. 16, lines 7 - 16; col. 20, line 34 through col. 21, line 24). Zayas, on the other hand, discloses an infrastructure for supporting file replications across a plurality of file servers for the purpose of automatically distributing data stored in files to users, thereby improving reliability, availability, local autonomy, load balancing, and data access performance.

In response to Applicants' argument (pages 20 - 22), the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971).

In fact, it appears that Applicants are interpreting the claims very narrow without considering the broad teaching of the reference used in the rejection.

Applicants are reminded that the examiner is entitled to the broadest reasonable interpretation of the claims. The Applicants always have the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified.

In re Prater 162 USPQ 541, 550-51 (CCPA 1969).

In view of such, the rejection is maintained and repeated as follows:

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1 – 28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 47 of copending Application No. 10/345,587 in view of Chung et al (US 20040088380; hereinafter Chung).

3. Claims 1, 22, and 36 of copending Application No. 10/345,587 claim all the limitations, except for at least one recipient node of said first group begins communicating a portion of its respective subfile that it is receiving from the first node to at least one other recipient node of said first group before the at least one recipient node fully receives its respective subfiles.

Art Unit: 2157

4. However, Chung teaches an analogous splitting and redundant storage on multiple servers, wherein at least one recipient node of said first group begins communicating a portion of its respective subfile that it is receiving from the first node to at least one other recipient node of said first group before the at least one recipient node fully receives its respective subfiles (paragraphs [0008 – 0009], and [0016]).

5. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of the instant application by incorporating the idea of having at least one recipient node of said first group begins communicating a portion of its respective subfile that it is receiving from the first node to at least one other recipient node of said first group before the at least one recipient node fully receives its respective subfiles as evidenced by Zayas for the purpose of speeding up the delivery of data stored in files to users, thereby improving reliability, availability, local autonomy, load balancing, and increasing the rate at which data can be delivered.

Claims 2 - 16, 18 – 20, and 22 – 28 of the instant application are the same as claims 2 – 21, 23 – 35, and 37 – 47 copending Application No. 10/619,737.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 – 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siew Yong Sim (US 6,970,939; hereinafter Sim) in view of Zayas et al (US 6,477,583), and further in view of Chung (US 20040088380; hereinafter Chung).

8. Regarding claim 1, 12 – 17, 20 – 21, and 24 - 26, Sim teaches a method of distributing a file from a first node to a plurality of recipient nodes (fig. 4), the method comprising the steps of partitioning a file F into a plurality of subfiles (col. 8, line 40 through col. 9, line 35); performing distribution of said file F to a plurality of recipient nodes using a distribution technique that comprises attempting to distribute the plurality of subfiles from a first node to a first group of recipient nodes, wherein the first node attempts to communicate at least one subfile to each recipient node of said first group but not all of said plurality of subfiles to any recipient node of said first group (col. 14, lines 25 – 39; col. 16, lines 7 – 16; col. 20, line 34 through col. 21, line 24); detecting a failed node (col. 21, lines 21 - 37); and said distribution technique adapting to distribute said file F to each non-failed node of said plurality of recipient nodes (col. 21, lines 21 – 37).

9. Sim teaches substantially all the limitations, but fails to specifically teach that said plurality of recipient nodes of said first group attempting to exchange their respective subfiles received from said first node.

10. However, Zayas teaches an analogous infrastructure for supporting file replications, which teaches the idea of a plurality of recipient nodes of said first group attempting to exchange their respective subfiles received from said first node (col. 1, lines 30 – 39; col. 3, lines 31 - 39).

11. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Sim by incorporating an infrastructure for supporting file replications across a plurality of file servers as evidenced by Zayas for the purpose of automatically distributing data stored in files to users, thereby improving reliability, availability, local autonomy, load balancing, and data access performance.

12. Sim and Zayas teach substantially all the limitations, but fail to specifically teach that at least one recipient node of said first group begins communicating a portion of its respective subfile that it is receiving from the first node to at least one other recipient node of said first group before the at least one recipient node fully receives its respective subfiles.

13. However, Chung teaches an analogous splitting and redundant storage on multiple servers, wherein at least one recipient node of said first group begins communicating a portion of its respective subfile that it is receiving from the first node to at least one other recipient node of said first group before the at least one recipient node fully receives its respective subfiles (paragraphs [0008 – 0009], and [0016]).

14. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Sim by incorporating the idea of having at least one recipient node of said first group begins communicating a portion of its respective subfile that it is receiving from the first node to at least one other recipient node of said first group before the at least one recipient node fully receives its respective subfiles as evidenced by Zayas for the purpose of speeding up the delivery

of data stored in files to users, thereby increasing the rate at which data can be delivered.

15. Regarding claim 2, Sim, Zayas, and Chung teach all the limitations in claim 1, and Sim further teaches, wherein said distribution technique adapting responsive to said detecting a failed node (col. 21, lines 21 - 37).

16. Regarding claims 3, 22, and 23, Sim , Zayas, and Chung teach all the limitations in claim 1, and Sim further teaches, wherein said attempting to distribute the plurality of subfiles from a first node to a first group of recipient nodes comprises: attempting to distribute a different subfile from said first node to each of said recipient nodes of said first group (col. 9, lines 23 - 25).

17. Regarding claims 4 and 18, Sim , Zayas, and Chung teach all the limitations in claim 1, and Sim further teaches wherein said attempting to distribute the plurality of subfiles from a first node to a first group of recipient nodes comprises: attempting to distribute the plurality of subfiles from said first node to said plurality of recipient nodes of said first group concurrently (col. 16, lines 11 – 20; col. 22, lines 12 - 24).

18. Regarding claims 5 and 19, Sim, Zayas, and Chung teach all the limitations in claim 1, and Sim further teaches wherein said plurality of recipient nodes of said first group attempting to exchange their respective subfiles further comprises: each of said plurality of recipient nodes attempting to establishing concurrent communication connections to every other recipient node of said first group (col. 11, lines 36 - 47).

19. Regarding claim 6, Sim, Zayas, and Chung teach all the limitations in claim 1, and Sim further teaches wherein said detecting a failed node comprises said first node

Art Unit: 2157

detecting a failed node in said first group such that said first node is unable to communicate a particular subfile to such failed node (col. 21, lines 21 - 37).

20. Regarding claim 7, Sim, Zayas, and Chung teach all the limitations in claim 6, and Sim further teaches wherein said attempting to distribute the plurality of subfiles from a first node to a first group of recipient nodes comprises said first node attempting to establish concurrent communication connections to the recipient nodes of said first group, and wherein said distribution technique adapting comprises responsive to said first node detecting a failed node in said first group such that said first node is unable to communicate a particular subfile to such failed node, said first node using its established concurrent communication connections with non-failed nodes of said first group to communicate the particular subfile to said non-failed nodes (col. 21, lines 21 - 37).

Regarding claim 8, Sim, Zayas, and Chung teach all the limitations in claim 6, and Sim further teaches wherein said distribution technique adapting comprises: responsive to said first node detecting a failed node in said first group after said first node has communicated a particular subfile to such failed node but before such failed node has communicated said particular subfile to every other recipient node of said first group, said first node establishing concurrent communication connections with non-failed nodes of said first group that have not received the particular subfile from said failed node, and said first node communicating the particular subfile to said non-failed nodes (col. 21, lines 1 - 37).

Art Unit: 2157

Regarding claims 9 - 10 and 27 - 28, Sim, Zayas, and Chung teach all the limitations in claim 1, and Sim further teaches wherein said detecting a failed node comprises: said recipient nodes of said first group exchanging heartbeat messages (col. 21, lines 20 - 37); at least one recipient node of said first group detecting a failed node from analysis of heartbeat messages received; and said at least one recipient node of said first group notifying said first node of said detected failed node (col. 37, lines 4 - 22).

Regarding claim 11, Sim, Zayas, and Chung teach all the limitations in claim 1, and Sim further teaches that said group of recipient nodes attempting to communicate said file F to a second group comprising a plurality of recipient nodes (col. 21, lines 21 – 37).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2157

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yves Dalencourt whose telephone number is (571) 272-3998. The examiner can normally be reached on M-TH 7:30AM - 6: 00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 13, 2007



YVES DALENCOURT
PRIMARY EXAMINER
TECHNOLOGY CENTER 2100